

Rising Input Prices Raised Variable Cash Costs

U.S. farmers planted beets on about 1.37 million acres and produced 26.57 million tons in 1996, 5.3 percent below the 1995 harvest. The largest decline in beet area was in Ohio, where planted acres fell 73 percent from 1995 levels to 4,400 acres in 1996. A 20- to 30-percent decline in beet area was reported in Michigan, Nebraska, California, and Texas. Planted acres increased the most in North Dakota, followed by Minnesota and Colorado. North Dakota and Minnesota growers planted beets on 667,600 acres, up 43,600 from 1995 and accounting for nearly half the total U.S. beet area.

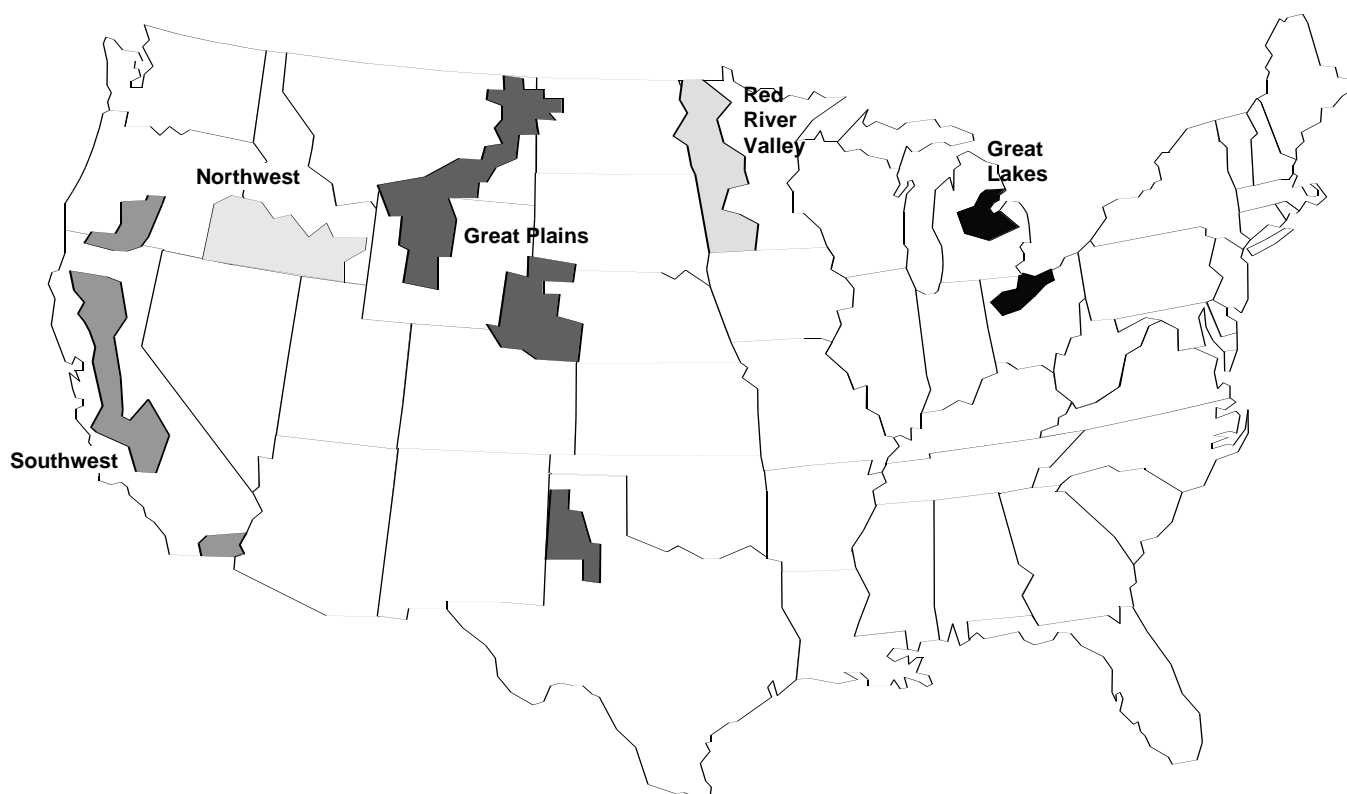
The overall 1996 prices paid index for farm production inputs rose an average 5.5 percent from 1995. However, price increases varied among individual inputs. The greatest was for fuel, 11.7 percent, followed by labor, 6.3 percent. Prices for fertilizers and chemicals rose about 3 percent from 1995. Rising input prices led to a 2.3-percent rise in total variable cash costs. In sugar beet production, hired labor, chemicals, and fertilizers were the major cash expens-

es, accounting for about 60 percent of the total variable costs. In 1996, expenses for these major inputs rose an average 3.5 percent from 1995. Regionally, hired labor expenses averaged 20-30 percent of total variable costs. The region most affected by rising wage rates was the Northwest, where the per acre wage bill increased 8.7 percent.

In 1996, U.S. beet yields per planted acre were very similar to those of 1995. However, the influence of weather varied among the beet-producing regions. Yields were slightly higher than in 1995 in all regions except the Great Lakes, where cool summer weather conditions slowed beet development. In the Great Lakes region, beet yields averaged 12.9 tons per planted acre, down 16.6 percent from 1995. On a per ton basis, variable cash costs averaged \$22.26, up 2.5 percent from 1995. Per ton variable costs increased in all regions except the Southwest, where they fell 2.6 percent from 1995. Per ton variable costs increased the most (20.6 percent) in the Great Lakes, primarily due to poor yields.

Figure 8-9

Sugar beet production regions



Notes: Shading and patterns indicate production regions where producers were surveyed in 1992 about production practices and costs of production.

Table 8-9A—Sugar beet production cash costs and returns, 1995-96¹

Item	United States		Great Lakes		Red River Valley		Great Plains		Northwest		Southwest	
	1995	1996	1995	1996	1995	1996	1995	1996	1995	1996	1995	1996
<i>Dollars per planted acre</i>												
Gross value of production:												
Beets	748.52	746.61	527.68	439.68	685.85	698.52	674.09	692.29	993.93	1,017.37	1,191.06	1,246.62
Beet tops	0.75	0.71	0.00	0.00	0.00	0.00	2.80	2.82	0.04	0.04	2.77	2.97
Total, gross value of production	749.27	747.32	527.68	439.68	685.85	698.52	676.89	695.11	993.97	1,017.41	1,193.83	1,249.59
Cash expenses:												
Seed	39.58	41.72	23.48	24.23	41.15	42.91	43.42	45.61	42.97	44.53	44.64	46.73
Fertilizer	70.06	70.89	67.14	70.86	39.90	41.68	88.02	90.51	121.00	125.82	101.69	107.98
Chemicals	71.21	73.91	58.77	60.63	68.13	71.12	74.75	77.24	79.62	82.75	86.14	89.32
Custom operations	40.15	34.71	30.97	24.37	24.12	24.34	23.38	22.64	36.59	36.55	188.03	166.70
Fuel and lubrication	39.05	41.64	21.24	22.77	17.85	21.87	49.03	53.53	93.50	95.71	60.65	65.27
Repairs	38.72	38.45	27.61	24.29	28.93	29.37	51.98	52.52	58.07	58.52	44.72	45.61
Hired labor	99.67	104.52	58.03	61.91	69.33	77.02	103.76	103.60	177.78	193.22	182.25	187.06
Purchased irrigation water	9.10	9.07	0.00	0.00	0.04	0.04	12.21	13.47	28.59	30.18	30.66	32.35
Freight and dirt hauling charges	13.40	16.01	6.22	6.29	9.55	11.93	15.42	18.11	11.80	14.11	45.33	64.52
Miscellaneous	11.53	12.83	4.45	4.16	14.47	16.54	5.47	6.15	5.34	5.62	33.68	37.42
Hauling allowance (-)	-6.87	-8.57	-2.28	-2.31	-9.14	-11.39	-1.88	-1.89	-1.24	-1.48	-24.78	-35.27
Total, variable cash expenses	425.60	435.18	295.63	297.20	304.33	325.43	465.56	481.49	654.02	685.53	793.01	807.69
General farm overhead	38.82	26.30	39.68	27.76	30.43	20.78	44.44	31.37	47.23	32.36	54.00	36.99
Taxes and insurance	43.40	36.14	59.37	51.47	39.36	32.92	40.57	34.34	38.40	32.39	52.58	47.19
Interest	49.70	35.95	52.85	38.78	45.83	33.00	56.97	42.13	51.21	36.99	45.44	32.83
Total, fixed cash expenses	131.92	98.39	151.90	118.01	115.62	86.70	141.98	107.84	136.84	101.74	152.02	117.01
Total, cash expenses	557.52	533.57	447.53	415.21	419.95	412.13	607.54	589.33	790.86	787.27	945.03	924.70
Gross value of production less cash expenses	191.75	213.75	80.15	24.47	265.90	286.39	69.35	105.78	203.11	230.14	248.80	324.89
Season-average price (dollars/ton)	38.19	38.19	34.11	34.11	38.38	38.38	37.14	37.14	40.42	40.42	39.40	39.40
Yield (net tons/planted acre) ²	19.60	19.55	15.47	12.89	17.87	18.20	18.15	18.64	24.59	25.17	30.23	31.64

Table 8-9B—Sugar beet production economic costs and returns, 1995-96¹

Item	United States		Great Lakes		Red River Valley		Great Plains		Northwest		Southwest	
	1995	1996	1995	1996	1995	1996	1995	1996	1995	1996	1995	1996
<i>Dollars per planted acre</i>												
Gross value of production:												
Beets	748.52	746.61	527.68	439.68	685.85	698.52	674.09	692.29	993.93	1,017.37	1,191.06	1,246.62
Beet tops	0.75	0.71	0.00	0.00	0.00	0.00	2.80	2.82	0.04	0.04	2.77	2.97
Total, gross value of production	749.27	747.32	527.68	439.68	685.85	698.52	676.89	695.11	993.97	1,017.41	1,193.83	1,249.59
Economic (full ownership) costs:												
Variable cash expenses	425.60	435.18	295.63	297.20	304.33	325.43	465.56	481.49	654.02	685.53	793.01	807.69
General farm overhead	38.82	26.30	39.68	27.76	30.43	20.78	44.44	31.37	47.23	32.36	54.00	36.99
Taxes and insurance	43.40	36.14	59.37	51.47	39.36	32.92	40.57	34.34	38.40	32.39	52.58	47.19
Capital replacement	51.36	51.14	35.93	31.68	38.00	38.58	68.64	69.18	83.27	83.9	51.73	52.76
Operating capital	11.90	11.08	8.26	7.56	8.51	8.28	13.01	12.25	18.28	17.45	22.16	20.56
Nonland capital	27.47	25.75	25.08	21.1	19.60	18.86	38.12	36.97	38.82	37.07	28.54	27.59
Land	128.22	132.30	96.98	93.37	126.35	131.89	104.22	109.94	171.85	169.94	167.58	183.37
Coop share	25.94	26.24	0.00	0.00	59.31	53.94	0.00	0.00	0.00	0.00	0.00	0.00
Unpaid labor	45.15	48.15	57.22	61.46	33.25	36.95	72.12	76.24	43.96	47.56	28.19	28.93
Total, economic (full ownership) costs	797.86	792.28	618.15	591.60	659.14	667.63	846.68	851.78	1,095.83	1,106.20	1,197.79	1,205.08
Residual returns to management and risk	-48.59	-44.96	-90.47	-151.92	26.71	30.89	-169.79	-156.67	-101.86	-88.79	-3.96	44.51
Season-average price (dollars/ton)	38.19	38.19	34.11	34.11	38.38	38.38	37.14	37.14	40.42	40.42	39.40	39.40
Yield (net tons/planted acre) ²	19.60	19.55	15.47	12.89	17.87	18.20	18.15	18.64	24.59	25.17	30.23	31.64

Note: Sugar beet regions defined as Great Lakes (Michigan, Ohio), Red River Valley (Minnesota, eastern North Dakota), Great Plains (western North Dakota, Montana, Wyoming, Nebraska, Colorado, Texas), Northwest (Idaho, Oregon, except Klamath County), and Southwest (California, Klamath County, OR).

¹1995 estimates are revised. 1996 estimates are preliminary. Sugar beet prices are held at the 1995 level because State-level prices for the 1996 season will not be available before January 1998.

²Yields are those reported in USDA's 1992 Farm Costs and Returns Survey of sugar beet growers adjusted for year-over-year changes as reported by NASS/USDA in *Crop Production*, 1996 Summary, January 1997.

Source: Economic Research Service, U.S. Department of Agriculture.

Table 8-9C—Beet sugar processing costs per net ton of sugar beets by cost item and area, 1995-96¹

Item	United States		East		West	
	1995	1996	1995	1996	1995	1996
<i>Dollars per net ton</i>						
Variable cash expenses:						
Beet acquisition	3.63	3.66	3.13	3.13	4.19	4.25
Processing	9.24	10.07	10.09	10.82	8.29	9.23
Labor	3.28	3.31	3.20	3.09	3.38	3.54
Fuel	3.55	4.35	3.66	4.49	3.42	4.19
Chemicals	0.75	0.75	0.83	0.83	0.66	0.66
Electricity	0.66	0.64	1.01	0.99	0.27	0.25
Materials and supplies	1.00	1.02	1.38	1.42	0.56	0.58
Repairs and maintenance	3.17	3.12	3.90	3.79	2.35	2.38
Labor benefits	2.12	2.13	2.17	2.10	2.07	2.17
Marketing	9.27	9.50	9.03	9.22	9.53	9.81
Total, variable cash expenses	27.42	28.48	28.31	29.06	26.43	27.83
Fixed expenses:						
Depreciation	1.68	1.59	2.29	2.17	1.00	0.95
Taxes and insurance	0.35	0.34	0.40	0.38	0.30	0.30
Interest	1.38	1.25	1.04	0.94	1.75	1.60
Total, fixed cash expenses	3.41	3.19	3.72	3.50	3.06	2.84
General and administrative	1.43	1.46	1.09	1.08	1.81	1.87
Labor	0.61	0.61	0.63	0.61	0.58	0.61
Nonlabor	0.82	0.85	0.46	0.47	1.23	1.26
Pulp drying and marketing	3.28	3.38	3.54	3.76	3.00	2.96
Total, processing costs	35.54	36.50	36.66	37.40	34.30	35.50
Credits:						
Dried pulp	5.57	5.47	6.62	6.68	4.39	4.12
Molasses	1.77	1.82	2.11	2.22	1.40	1.37
Other	0.45	0.43	0.53	0.52	0.36	0.33
Total, credits	7.79	7.72	9.26	9.42	6.15	5.82

Table 8-9D—Beet sugar processing costs per pound of refined sugar by cost item and area, 1995-96¹

Item	United States		East		West	
	1995	1996	1995	1996	1995	1996
<i>Cents per pound of refined sugar</i>						
Variable cash expenses:						
Beet acquisition	1.243	1.253	1.107	1.109	1.385	1.403
Processing	3.164	3.447	3.572	3.832	2.739	3.047
Labor	1.124	1.132	1.132	1.096	1.116	1.170
Fuel	1.215	1.489	1.297	1.590	1.129	1.384
Chemicals	0.258	0.257	0.295	0.294	0.220	0.219
Electricity	0.226	0.220	0.359	0.351	0.088	0.083
Materials and supplies	0.341	0.350	0.489	0.502	0.186	0.191
Repairs and maintenance	1.084	1.068	1.380	1.341	0.776	0.785
Labor benefits	0.726	0.730	0.768	0.743	0.683	0.715
Marketing	3.173	3.252	3.198	3.265	3.147	3.240
Total, variable cash expenses	9.390	9.751	10.025	10.290	8.730	9.190
Fixed expenses:						
Depreciation	0.576	0.546	0.811	0.769	0.331	0.314
Taxes and insurance	0.120	0.117	0.140	0.136	0.099	0.098
Interest	0.471	0.429	0.367	0.334	0.579	0.527
Total, fixed cash expenses	1.167	1.092	1.319	1.239	1.010	0.939
General and administrative	0.489	0.498	0.386	0.383	0.597	0.618
Labor	0.208	0.209	0.224	0.217	0.192	0.201
Nonlabor	0.281	0.290	0.162	0.167	0.405	0.417
Pulp drying and marketing	1.124	1.157	1.252	1.331	0.991	0.977
Total, processing costs	12.170	12.498	12.981	13.243	11.327	11.724
Credits:						
Dried pulp	1.907	1.872	2.345	2.364	1.451	1.360
Molasses	0.607	0.623	0.746	0.787	0.462	0.453
Other	0.155	0.148	0.189	0.185	0.119	0.109
Total, credits	2.669	2.643	3.280	3.336	2.032	1.922
Recovery per net ton of beets (lbs)	292.000	309.200	282.400	311.000	302.800	307.200

¹Eastern region is Red River Valley and Michigan/Ohio; Western region is all others.

Source: Economic Research Service, U.S. Department of Agriculture.